Claims

I claim:

Claim 1. A protective barrier device for protecting frangible portions of a structure from wind force and wind born objects comprising at least one panel of flexible mesh material with a burst strength greater than 61.3 psi and an interstice size preventing passage of wind born objects greater than 3/16 inch diameter, approximately, said panel including a peripheral hem adapted to secure said panel to said structure whereby said panel is spaced apart from said structure a minimum deflection distance to allow for deceleration of objects impacting said panel before the objects impact the frangible portions of said structure.

Claim 2. A protective barrier according to claim 1 wherein said panel is a textile formed from synthetic threads.

Claim 3. A protective barrier according to claim 2 wherein said textile is resistant to ultra violet, biological, and chemical degradation.

Claim 4. A protective barrier according to claim 2 wherein said textile is polypropylene.

Claim 5. A protective barrier according to claim 2 wherein said textile is vinyl-coated polyester.

Claim 6. A protective barrier according to claim 1 wherein said panel is transparent.

Claim 7. A protective barrier according to claim 1 wherein said panel includes a superposed layer of continuous film.

Claim 8. A protective barrier according to claim 1 wherein said peripheral hem has a plurality of releasable fasteners, some of said fasteners adapted to attach to ground anchors to secure said panel spaced apart from said structure.

Claim 9. A protective barrier according to claim 1 wherein said barrier includes a plurality of said panels, said panels having parallel edges adapted to be releasably connected, said edges having cooperating releasable fasteners spaced therealong.

Claim 10. A protective barrier according to claim 9 wherein said spaced fastenings are reinforced with a tape means attached to the material in a butterfly pattern.

Claim 11. A protective barrier according to claim 10 wherein said tape is polypropylene.

Claim 12. A protective barrier according to claim 9 wherein said spaced fastenings are set in from an edge of said curtain means to cause said edge to extend past inset fasteners to eliminate any gap that may otherwise exist between the edge and an attaching means.

Claim 13. A protective barrier device for protecting frangible portions of a structure from the force of wind and wind born objects comprising at least one panel of flexible mesh material having a maximum deflection of approximately 20% before failure and air permeability of approximately 250 cfm at a wind force of 1 inch Hg., said panel having an upper edge and a lower edge, said upper edge adapted to attach to said structure and said lower edge adapted to attach to the ground in such a manner to provide a minimum deflection distance between said structure and said panel greater than said maximum deflection distance of said panel.

Claim 14. A protective barrier according to claim 13 wherein said minimum deflection distance is calculated according to the steps of:

dividing the impact test force by the failure force of said panel to obtain a fraction, the quotient must be less than or equal to 1 for the panel to be acceptable;

multiplying said fraction by the known stretch of said panel at failure to obtain a stretch factor;

multiplying said stretch factor by the span distance of said panel to obtain a resultant measurement of stretch;

adding said resultant measurement of stretch to be added to said span distance to obtain a sum;

dividing said sum by 2 to form the hypothenuse of a right triangle, the known side of the right triangle is the span length divided by 2;

subtracting the square of the known side from the square of the hypothenuse to obtain the square of the maximum deflection;

calculating the square root of said square to obtain a final measurement as the minimum distance said panel is mounted from the frangible portion of said structure being protected.

Claim 15. The protective barrier according to claim 14 including a step of allowing for wind pressure comprising;

adding the resultant cumulative pressure calculated on a length of said span and on the maximum wind speed to be allowed to said impact test force obtaining a net sum;

substituting said net sum of said two forces for said impact test force.

Claim 16. The protective barrier according to claim 13 including a step of allowing for curtain means attachment comprising:

adding a slack distance to said final measurement, said slack distance solely as a result of anchoring slack, said minimum distance being the sum of said slack distance and said final measurement.